160 Arthralgia

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Definition

Arthralgia means pain in a joint. *Polyarthralgia* means pain in several joints (two or more for the purposes of this discussion). *Arthritis* is a diagnosis and is not a symptom; its diagnosis requires the physical signs of articular inflammation or the physical or roentgenographic signs of osteoarthritis. The major disorders associated with arthritis (and hence with arthralgia) are summarized in Table 159.2 in the preceding chapter.

Technique

Once a rheumatic pain syndrome has been localized to one or more joints, additional historical data are required. First determine whether or not other signs of inflammation (of the joint) have been observed by the patient. Redness, warmth ("fever"), and especially swelling should be specifically addressed. The nature of the onset should be established early in the interview. If the arthralgia began recently and was rapid in onset, the syndrome can be considered acute and a specific differential diagnosis (Table 160.1) is suggested. Regardless of the nature of the onset, arthralgia that has persisted for a month or longer can be considered chronic or persistent, and other differential diagnoses are suggested, depending on whether one joint (Table 160.2) or more than one joint (Table 160.3) has been symptomatic.

Obviously the affected joint or joints should be listed by the patient, in the order of their involvement in the case of polyarthralgia. It is helpful to know in what joint the arthralgia began and its subsequent pattern of spread. "Where did it move next?" is a useful question. Meanwhile, the interviewer should not lose sight of the behavior of each affected joint; brief notes are almost essential for this purpose when more than three or four have been involved. For each affected joint or set of joints, the interviewer might record the date of initial involvement, severity, progression, and date of resolution, if that has occurred. Classic migratory polyarthritis and discrete episodes of acute or self-limited arthritis will be apparent by such notations. In the case of persistent polyarthralgia it is worth asking which joint or joints have been most symptomatic during the illness, though the resulting information may be more helpful therapeutically than diagnostically.

All the disorders associated with inflammatory polyarthritis have extraarticular or systemic manifestations, and these should be addressed during the interview, perhaps by a "review of systems" approach. The major extraarticular manifestations of some of the most common arthropathies are summarized in Table 159.3 in the preceding chapter. The inexperienced interviewer might benefit from referring to such a list during the interview in order to assure completeness in this crucial area. The importance of these questions cannot be overemphasized; responses to them play a major role in suggesting specific connective tissue diseases or spondyloarthropathies.

Osteoarthritis of the small hand joints and all of the connective tissue diseases are familial, especially in women. Fifteen to 20% of patients with a spondyloarthropathy give

Table 160.1
Differential Diagnosis of Acute-Onset Arthritis

Disease	Associated features	Comment
Acute traumatic	None	History of joint trauma (usually knee)
Flare in osteoarthritis	None	History of prior joint symptoms and history of overuse
Pseudogout	Fever occasionally	Common in knee, ankle, shoulder, and wrist; usually monarticular
Gout	Fever is common	Common in first metatarsophalangeal, knee, mid-foot, ankle, and wrist. First few attacks usually monarticular
Reiter's syndrome	Fever is common (see Table 160.3)	Common cause of acute arthritis in young men
Gonococcemia	Fever, skin lesions, and hand tenosynovitis are common	Common cause of acute arthritis in young women. May be monarticular or polyarticular
Serum sickness-like reactions	Fever and rash (usually urticaria)	History of drug or hepatitis B exposure
Nongonococcal bacterial arthritis	Fever	Usually monarticular and large joint; history suggestive of compromised host
Systemic lupus erythematosus (SLE)	See Table 160.3	Common mode of onset of SLE; knees and finger proximal interphalangeal joints commonly involved
Rheumatoid arthritis	May be none; fever uncommon in adults (see Table 160.3)	Unusual mode of onset in adults
Erythema nodosum	Fever and typical skin lesions	Ankles usually involved
Acute rheumatic fever	Fever; other features uncommon in adults	Classic migratory polyarthritis; history of sore throat or prior attacks

Table 160.2
Differential Diagnosis of Chronic Monoarthritis

Osteoarthritis: Most often knee
Internal derangement (torn meniscus, osteochondritis, loose body, etc.): Usually knee; history of injury
Synovitis of unknown cause: Usually knee and usually remits in months or a few years
Rheumatoid arthritis: Inflammatory history; always progresses to involve other joints, only more slowly than typical RA
Traumatic synovitis: Usually knee; history of definite trauma
Spondyloarthropathy: See Table 160.3; always progresses to involve other joints, only more slowly than typical spondyloarthropathy
Chondrocalcinosis: Often knee; history suggestive of pseudogout
Chronic infection: Systemic symptoms may occur
Tumor (including pigmented villonodular synovitis): May be rapidly destructive, leading to progressive disability

Table 160.3
The Seven Common Diseases Associated with Chronic Polyarthritis

Osteoarthritis: Inflammation is minimal. Symptoms usually limited in distribution. Small hand joints (except metacarpophalangeal), neck, hips, and knees are common sites. Older age onset
Rheumatoid arthritis: Inflammation is prominent. Prominent polyarthralgias and stiffness. Spine below neck is spared. Middle-aged (female) onset
Chronic (tophaceous) gout: History of earlier discrete attacks. Spine, shoulders, and hips are uncommonly affected. Middle-aged to older (male) onset
Systemic lupus erythematosus: History of multisystem involvement (Table 159.3). Small hand joints and knees commonly affected. Young (female) onset
Reiter's syndrome: History of urethritis and conjunctivitis and acute onset in about half. Large lower extremity joints predominate. Young (male) onset. See Table 159.3
Ankylosing spondylitis: History of back pain. Spinal (axial) involvement predominates. Young (male) onset. See Table 159.3
Psoriatic arthritis: History of psoriasis (in most). Variable joint distribution with distal interphalangeal joint involvement typical. Affects adults at any age. See Table 159.3

a family history of a similar disease. Gout is also familial, and some rare patterns are genetically determined. Consequently, a family history is a necessary part of the musculoskeletal history when arthralgia is present. "Is there arthritis in your family?" is an appropriate initial question, but a positive response should be followed by questions concerning joint distribution, signs of inflammation, and degree of resulting disability. With such an inquiry it may be possible to identify the disease fairly accurately in each affected relative. Such an identification can significantly contribute to the diagnosis of the patient being interviewed.

For therapeutic rather than diagnostic reasons, it is important to quantify the seriousness of a chronic arthralgia syndrome in terms of disability. "What can't you do because of your joint problem?" is a useful initial question. Whenever possible, each major disability should be linked to the involvement of one or more specific joints. For some patients, it is helpful to approach this issue from the viewpoint of the joint rather than the disability: "What does your knee (or hip or other joint) problem keep you from doing?" Progression of disease can also be documented by comparing disability at two moments in time: "What can't you do now that you could do one year ago?" At the completion of this portion of the history, the interviewer should have addressed gainful occupation, pleasurable activities, and home and self-care, as well as more specific functional limitations.

Basic Science

Osteoarthritis is basically a noninflammatory arthropathy, and it can be traumatic in origin; however, overuse of an osteoarthritic joint can initiate a secondary inflammatory process. Patterns of joint usage and a history of joint trauma should be explored in patients suspected of osteoarthritis.

The other common arthropathies result from an initial and primary inflammatory process in the synovial membrane of the joint. Symptoms reflect this inflammatory process, at least initially. Many of these diseases have a potential for causing articular destruction, and symptoms that occur late in their course often reflect joint damage. In general, these mechanical symptoms include less stiffness and less joint pain at rest than do those predominantly due to inflammation. The inflammatory arthropathies are a heterogeneous group of diseases; their etiologies (when known) and pathogenetic mechanisms are diverse.

Clinical Significance

Arthralgia is the most significant rheumatic symptom because of the potentially serious diseases it may reflect. Arthralgia unaccompanied by signs of inflammation and extraarticular symptoms may be transient and of little clinical importance, or may represent the initial stages of a connective tissue disease or other serious disorder. When accompanied by signs of inflammation or extraarticular symptoms, arthralgia is almost always clinically significant and usually reflects a diagnosable disease.

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